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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,420	11/19/2003	Igor Y. Botvinnik	SHPR-01414US1	7739

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EXAMINER

MAYEKAR, KISHOR

ART UNIT PAPER NUMBER

1753

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,420	BOTVINNIK ET AL.	
	Examiner	Art Unit	
	Kishor Mayekar	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 21 is objected to because of the typo error in the phrase "is receives".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8, 11-23, 25, 26, 28-32, 34-37, 39, 42-48 and 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 4,789,801) in view of Natarajan et al. (US 4,264,343). Lee's invention is directed to an electrokinetic transducer and system comprising the same. Lee discloses in Fig. 3 a

system, which produces airflows and serves as electrostatic precipitators, comprises all the structures as claimed except for the driver electrode located between a pair of collector electrodes is not insulated. Lee also discloses that the electrodes are excited by pulsed exciting voltages where the individual pulses are all negative or all positive (abstract or col. 5, lines 16-21). Natarayan shows in an electrostatic precipitator the provision that the electrode located between a pair of collector electrodes is insulated with a layer of dielectric material comprises of ceramic (Fig. 16, abstract and paragraph crossing cols. 7 and 8). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Lee's teachings as suggested by Natarayan because this would result in preventing sparking or arcing between the electrode and the collector electrodes and in achieving high electrostatic fields therebetween.

As to the subject matter of each of claims 2-4, 16-18, 20, 21, 35, 36, 45-48, 51, 52, 55 and 56, Natarayan shows in col. 4, lines 32-64 and col. 8, lines 28-46 that different configurations or connections of the polarities of all the electrodes. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Lee's teachings as

suggested by Natarayan because, as to the polarity configurations or connections of all the electrodes, the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself.

As to the subject matter of claims 6 and 23, since Lee discloses in col. 6, lines 36-42 that the location of the [driver] electrode with respect to collector electrodes, as such the selection of the location placement of the [driver] electrode with rest to collector electrodes would have been within the level of ordinary skill in the art.

As to the subject matter of claims 53 and 54, it has been held to be obvious as the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have.

4. Claims 7, 9, 10, 24, 27, 33, 38, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee '801 as modified by Natarajan '343 as applied to claims 1-6, 8, 11-23, 25, 26, 28-32, 34-37, 39, 42-48 and 50-56 above, and further in view of Weinberg (US 6,042,637). Lee as applied above further discloses that his improved system produces less ozone (paragraph crossing cols 1 and 2). The difference between the references as applied above and the instant claims is the

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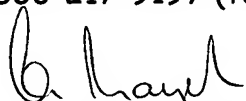
provision of ozone reducing catalyst. Weinberg shows in air ionizer the provision of a catalyst to reduce the emission of ozone (paragraph crossing cols. 3 and 4). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as suggested by Weinberg because if the emission of ozone is high the provision of an ozone reducing catalyst would further reduce the ozone emission.

5. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee '801 in view of Natarayan '343, Weinberg '637 and Satyapal et al. (US 5,879,435). The further difference between the references as applied above and the instant claims is the provision of a lamp for reducing the amount of microorganisms in air. Satyapal shows the above limitation in an air ionizer (see abstract). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as suggested by Satyapal because this would result in a complete air cleaning.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kishor Mayekar
Primary Examiner
Art Unit 1753